EU-funded technical assistance project

Technical assistance to improve implementation of food safety standards and disease crisis preparedness

Activity 5.3.1

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Prepare step-by step plan/scenario for the implementation of animal disease crisis preparedness simulation exercises;

Scenario for simulation exercise for FMD in bovine with participation of other stakeholders

August, 2022

"Project funded by the European Union Aid Programme for the Turkish Cypriot community, implemented by NSF Euro Consultants Consortium"

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1. Introduction

Practice taught us that good preparation is crucial for the implementation of animal disease crisis preparedness simulation exercises. In this case the participants will be familiarized with the new concept proposed by the project in relation to the contingency documentation drafted and the documentation and procedures in self including the practical exercise in respect of notification, outbreak communication, entering the farm, epidemiological investigation and risk communication.
The steps that will be followed when planning the simulation exercises are:

- Setting up the objectives, (e.g. change in legislation, change in the working documentation, raising of awareness; elements of emergency plans; adherence to those plans; speed of response; decision processes; information sharing, cooperation and coordination, etc),
- Identification of players, (functions and role-plays in the exercise; engagement at an early stage),
- Selection of type of exercise, (discussion-based exercise (table-top) or operation-based exercise (drill, functional/command post exercise/full-scale exercise) in consultation with the CA and taking into consideration the available budget resources),
- Design and development of scenario, (objectives, scenario background, main events, incidents, injects)
- Determination of logistics and documentation, (facility and rooms, audio/visual requirements, equipment and consumables, exercise instructions, etc),
- Determination of evaluation plan (addressing each objective),

Since the project drafted new documentation for crisis preparedness it is of paramount importance to test effectiveness and operability of this documents. The evaluation process will be conducted through the simulation of the event of Foot and mouth disease in bovine holding.

Once the scenario is designed it must not be disclosed to the participants prior to the simulation exercise. The scenario will be revealed/presented to the groups according to the timetable defined by the exercise leader expert.

During the simulation, the groups will receive a step-by step plan/scenario wherein they will be required to respond to a situation as prompt as possible. The goal for the groups is to address the situation in the provided scenario using the available procedures for crises management.

This simulation exercise will be focused on the presentation of the management of the outbreak of FMD on bovine farm and utilization of the SOP for notification of disease, entering the farm, epidemiological investigation, collecting samples, killing, safe disposal and cleaning and disinfection. In addition, specific attention will be given to the activities of the VD necessary to control the outbreak management. The proposed scenario is related to the event in which Foot and mouth disease is suspected in cattle farm. The sim-ex will include as well other stakeholders so they can be familiarized with the work of the VD in event of emergency.

The exercise will start with the test prior to the simulation. The test will be composed of 5 questions to determine the baseline knowledge of participants regarding the disease which will be tested/simulated (initial test of knowledge). The test will be repeated at the end of the simulation exercise to verify the training effect. The exercise will take two days on for practical exercise as foreseen with the scenario and this plan. Finally, the participants will be asked to provide feed-back from the exercises and final overall evaluation of the training.

2. Purpose

The purpose of this simulation exercise is to present the new documents drafted by the project support for outbreak of FMD in bovine, scope and amount of work and activities that are implemented by the VD in event of an outbreak, raising awareness and assessment of the current state of preparedness for such event for the stakeholders to whom specific task has been delegated in the contingency documentation. The evaluation of the exercise and provided feedback should identify issues and will serve to improve the plan, manual, procedures, organizational structure and resource employed in managing an event of a disease that require immediate respond.

3. Scope

The scope of this exercise is to assess the new documentation for contingency, presentation of the activities and preparedness of the VD office and field staff working in a local district including the stakeholders that are relevant for the support of the VD. The exercise will have presentation and practical exercise for notification and reporting of the disease, outbreak communication, entering farm and investigation the event, collecting and sending samples, planning killing of the animals and their safe disposal, cleaning and disinfection.

4. Objectives

4.1 Overall objectives

The overall objective of the simulation exercises:

- familiarisation of the staff and relevant stakeholders on the new Contingency plan, Operational manual and procedures,
- familiarization of the stakeholders with the work load of the VD during outbreak management and possible assistance that can be provided,
- allow participants to practice their roles and decision-making,
- identify gaps or deficiencies in preparedness in the procedures listed in point 4.2,
- continuous learning,
- assess overall emergency response capability.

4.2 Specific objectives

The specific objective of the simulation exercises:

- assessment of the structure of the new developed documentation,
- assessment of the specific procedures, outbreak notification and collecting of data, outbreak communication, entering on the farm and investigation of disease, collection of samples, killing of animals, safe disposal and cleaning and disinfection,
- assessment of the available equipment,
- raising awareness on FMD in bovine,
- collect and analyses the feedback from the exercise and improvement of the documentation.

5. Scenario

Tentative agenda is provided in **Annex 1** of this document.

5.1 Practical task

Part I (Day 1 - work in 2 groups – desk top)

Group 1 and 2: based on the scenario (information on the outbreak of foot-and-mouth disease in bovine farm), the group prepares for a press briefing. Simulation of a press conference on which representative from the group (or more of them) provide for short briefing and basic information on the outbreak. Representatives of the groups answer questions from the media represented by the facilitators. Other attending stakeholders are participating as an observer but it can pose an questions relevant for their area of competence.

group 1 and 2 – NDCC
Task 1 – receive the notification of outbreak,
Task 2 – prepare and discus the list of stakeholder to be informed and the type of information per target group,
Task 3 – identification of the task and activities where other stakeholders can be engaged in outbreak management,
Task 4 – prepare briefing,
Task 5 – conduct a briefing,
Task 6 – propose the animal health measures and restriction zones,

Both groups are working on the same scenario separately and prepare briefing and for the measures they would implement in accordance with the proposed scenario. Two representatives of each group execute the briefing.

Part II (Day 2 - work in 2 groups – desk top/field training)

All participants are divided in 2 group (composition of the groups day before):

- Biosecurity measure when entering and leaving the farm,
- Epidemiological investigation,

groups 1 and 2 – LDCC
Task 1 – Enter and leave the farm observing the biosecurity protocols,
Task 2 – Conduct an epizootic investigation of the primary outbreak of foot-and-mouth disease in order to identify a possible source of infection and the date of probable introduction of the pathogen into the enterprise.

Both groups are working on the same task separately.

Part III (Day 2- work in groups – desk top)

All participants are divided in 2 groups participating in the LDCC, (composition of the groups is prepared during the morning session). Group 1 and 2: based on the scenario work on the following tasks:
Task 1 - Both groups develop an action plan to eliminate the outbreak with the definition of functions for all involved parties (local governments, Ministry of emergencies, Ministry of health, police, etc…),
Task 2 - The groups prepare for the simulation meeting of the LDCC.
Task 3 - The groups take part in the meeting of the LDCC in case of foot-and-mouth disease by presenting a plan of measures to eliminate the disease. At the same time, the expediency of each event is substantiated by the NDCC,

Task 4 - Conducting a discussion of the measures taken. Each group should indicate the strengths and weaknesses of the measures proposed,
Task 5 - Group representative present the results of the epidemiological investigation and develop hipothesis,
Task 6 – Develop a plan to kill the animals,
Task 7 – Develop a plan for safe disposal of animals,
Task 8 – Develop a plan to clean and disinfect the premises,

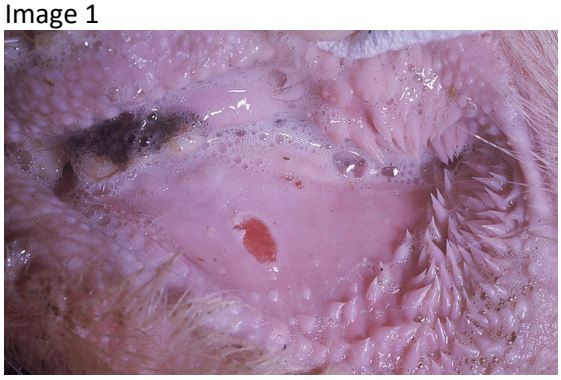
5.2 Scenario

According to the veterinarian notification form, starting from May 17, suspicion has been raised for presence of FMD in two dairy bovine animals, which were depressed, had a reduced appetite and were reluctant to move. Clinical examination revealed that one cow had temperature of 40.5^{o}C, and lesions in mouth (image 1).

The same day the veterinary specialist form the VD visit the farm. Conducted investigation and collected samples. One of the calves have died four days before and some clinical symptoms was detected in cows. The farmer recorded a 30% decrease in milk production in his cows over the past two days, and noticed that some of the dairy cows were lame, salivating, and many seemed sick and depressed. Sick cows were isolated and treated symptomatically including all biosecurity measures.

On 18th of May, the laboratory results confirm the presence of the FMD.

Image 1



For reference: The epizootic situation with regard to foot-and-mouth disease in the territory of the norther part of Cyprus is stable. The northern part of Cyprus has the status of a country free of foot-and-mouth disease without vaccination, so the use, including production, of foot-and-mouth disease vaccines and the use of hyperimmune foot-and-mouth disease sera are prohibited, except in cases as provided in the contingency plan for FMD.

Location: FBO "Slim-ex", an intensive dairy farm with Holstein-Friesian cattle is located in the village of TBD, TBD region. Farm is selling the milk to the dairy factory placed in TBD. The calves and bulls are traded to trader. Rarely the animals are sold through the market or directly to a slaughterhouse.

Livestock: There are 251 cows and replacement heifers in the herd and 45 calves up to 6 month of age and 5 bulls over 1 year of age. Cows are exclusively kept in XX and XX (TBD). Dry cows and heifers are kept separately form the milking cows. This barn is mark with number XX. Some heifers are kept for replacement, some are sold, and bulls are sold when they reach 12 months and older. The calves and bulls

are kept on the farm in separate facility, number XX that is semi open where animals are keep in according to their age.

Feeding and water: Water is used from a well located on the farm that is regularly controlled for quality. Feeding is in general mixed. Cattle are not grazing.

Breeding: Only good quality dairy bull semen is used to reproduce the herd. Calves are separated after birth.

Staff: The farm employs 15 people living in this village and neighboring villages. Staff are not allowed to have animals at home. Staff are well trained and comply with the biosecurity plan of the farm.

Biosecurity: - the level of biosecurity at the enterprise is assessed as very good and that it can ensure the operation of the enterprise in a closed mode. The farmer has sufficient equipment that satisfy the need for the farm and as well for work in the fields. No equipment is borrowed. Some of the fields are for feed production and on some the fields they produce other agricultural products. The feed is produced mainly on holding and some small quantity of feed is purchase. Last time two weeks ago feed has been purchased from Turkey, they shared the transport with other farmer form village of TBD. The milk truck is visiting every day to collect the milk, but he does not enter the farm. No one else except family and workers are allowed on farm. From time to time children and plaining will calves, last time, one week or more ago when they had visit from relative from Turkey.

Emergency notifications: - Since the beginning of 2022, there have been no notification of any suspicion of disease on the farm, all measures for animal health are conducted.

Maps and injects are provided in **Annex 2** of this document

6. Format

Format of the exercise is mixture of desk-top and drill exercise. The morning session of the first day will be used for presentation of the new concept and new drafted documents. The afternoon session will be desk top practical exercise. The second day will be used for drill exercise in the morning session and desk-top exercise in the afternoon.

7. Location

The location of the sim-ex will be in class room environment in Nicosia suitable for organizing work in groups and bovine farm TBD in agreement with the beneficiary.

8. Participants

The trainee

The participants should be representatives from the head and local office of the VD and all other relevant stakeholders deemed necessary or that can support the outbreak management. The final list of participants will be discussed and agreed with beneficiary and added **Annex** 3 of this document.

Facilitators

The facilitators will be provided by the project and by the VD. For the purpose of this exercise the proposed list of the facilitators is as follows:

1. Mehmed Demirpenche, overall facilitation
2. Mustafa Tufan, presenter and facilitation of the group work
3. Blagojcho Tabakovski, presenter and facilitation of the group work,
4. Engin Kocan, facilitation of the group work,

Technical staff

1. Firuza Ariso, organization and logistic of the sim-ex,
2. Engin Kocan, collecting feedback and support the sim-ex overall,

9. Documentation

The following documentation will be utilized during the exercise:

1. CP form FMD,
2. OM for FMD,
3. SOPs for FMD,
4. Presentation,
5. Exercise materials:

- Blank notification form Part 2,
- Blank investigation form,
- Printed scenario,
- Printed additional documentation,

10. Communication

The mode in which the exercise is active will always designated with the word >exercise, exercise, exercise>. When in the course of exercise need to be facilitated or at the end of the exercise the word <pause> and <stop> will be used respectively.

The information relevant for the execution of the exercise will be provide by the facilitators. Part of the information will be provided in writing to the participants and additional information which will be required from the participants will be provided by the facilitators who will play the roles of veterinarian, farmer, press etc.

All outside communication in the exercise will be done by phone.

11. Logistic

The logistic will be provided by the project. In case of these exercise the VD should use available equipment. If VD do not have the necessary equipment (**Annex** 4) the equipment will be provided by the

project. The project will provide suitable class room environment and lunch and two coffee break for each day. The transportation to the bovine farm and class room will be agreed with the beneficiary.

Annex 1 – Agenda

Tentative

Sim-ex 6			Material ID
Day 1	Morning session	Registration of participants, establishments of the group, presentation of the CP and OM and SOPs for FMD for entering the farm, epidemiological investigation, sampling, killing of animals and cleaning and disinfection.	PPP
	Afternoon session	Practical exercise Part I Practical work in groups, preparing and conducting briefing, type of measures in accordance with the provided scenarios	Documentation for exercise
Day 2	Morning session	Practical exercise Part II Practical work in groups – entering the farm, epidemiological investigation	Documentation for exercise
	Afternoon session	Practical exercise Part III Practical work in groups – presentation of the epidemiological findings, clinical examination and collecting of samples, planning of killing and safe disposal of animals and cleaning and disinfection of the farm	Documentation for exercise

Annex 2 – Maps and Injects

Scenario 1

Map 1

Map 2

Farm dimensions:

Injects

Inject No 1					
Date / Time	Day 2 Part II, morning session				
From:	Owner of the neighbouring farm				
Recipient:	LDCC				
Title:	Sim-Exe 6: contact holding				
Content:	Exercise – Exercise – exercise The farm that shared the transport reported drop of production of milk for 20% in the past few days. The local PVP hear about the problem in other farm so he is concerned about his animals.				
Means of communications:	Web page:	E-mail:	Fax:	Phone	Other: In person
Purpose:	To stimulate the work in group to include the contact holding in investigation				
Expected reaction:	The LDCC require contact details for the contact holding, elaborate the reason for such action and continue the investigation on occurring of FMD				
Observed reaction:					
Comments:					

Inject No 2					
Date / Time	Day 2 Part II, morning session				
From:	Owner of the neighbouring farm				
Recipient:	LDCC				
Title:	Sim-Exe 6: contact holding				
Content:	Exercise – Exercise – exercise The official veterinarian is presented with the images of the animals found on the second farm. Out of 100 animals (85 cows and replacement, 12 calves and three bulls) there are some clinical sings in three of theme, image 2 and 3. Other animals appear to be healthy. One animal has been introduced on the farm one weeks ago with the health certificate.				
Means of communications:	Web page:	E-mail:	Fax:	Phone	Other: In person
Purpose:	To stimulate the clinical stimulation and selection of animals for sampling if necessary.				
Expected reaction:	The LDCC should establish the health status of the animals on the farm and to decide the type of samples that need to be collected and the type of measures that will be introduced on the holding				
Observed reaction:					
Comments:					

Image 2

Image 3

Annex 3 – List of participants

TBD – provided by the beneficiary

Annex 4 – Necessary equipment

TBD – ideally available equipment of the beneficiary

Equipment consumables	NDCC	LDCC
Field equipment		
Protective clothing including		
	- wellingtons (waterproof boots), - overalls, - waterproof coat and trousers, - waterproof overall suit, - disposable suits, - disposable overshoes, - disposable gloves, - ear protection, - eye protection (face visors or goggles), - headlamp, - water prove adhesive tape, - scissors,	- wellingtons (waterproof boots), - overalls, - waterproof coat and trousers, - waterproof overall suit, - disposable suits, - disposable overshoes, - disposable gloves, - ear protection, - eye protection (face visors or goggles), - industrial gloves (safe against acidic and alkaline disinfectants), - headlamp, - water prove adhesive tape, - scissors,
Equipment for personal disinfection		
		- 3 bucket, - brush - active disinfectant (in accordance with the disease), - active detergent (in accordance with the disease), - heavy duty plastic sheet, - disposable bags,
Equipment for the restraint of animals and for clinical examination		
		- injectable sedatives, tranquilizing drugs, - syringes and needles, dart guns. - clinical thermometers, - phone/camera,
Equipment for post mortem examination and collection of diagnostic samples		
		- set containing post mortem knifes with a different selection of blade lengths, - neat resistant thermoplastic handle with finger protecting projection - sharpening steel for knives, - scalpel handle and disposable scalpel blades, - scissors -straight blades, rounded ends, - scissors -straight blades, pointed ends, - enterotomy scissors, straight blades, rounded end, ball end,

		- rat tooth forceps, - plain tipped forceps - butchers saw and spare blades, -- sterile hypodermic needles - sterile disposable syringes, - bone cutting forceps, - vacuum containers for blood and tissue fluid samples, - case to carry sampling kit, - packing materials, containers for diagnostic samples, plastic or metal trays and boxes, - polythene sampling bags, - polystyrene screw cap sterile containers, - refrigerated insulated transport boxes, - insulated box for transit of samples, - freezer packs, - adhesive labels, - marking pens.
Equipment for the collection of blood samples		
		- syringes and needles, - needles holders, - vacutainers, or monovets for whole blood and serum, - plain glass tubes, - tube labels, - absorbent packing material, - primary and secondary packaging, - zip-locked bags, - labels, - markers,
Equipment for the culling of animals for (diagnostic) purposes		
		- lethal injections(drags) suitable for all susceptible species, - syringes and needles, - captive bolt pistols, - equipment for movement and transport of carcasses,
Equipment for cleaning and disinfection		
		- large and small brushes, - long-handled yard brushes, - wire brushes, - shovels, - forks, - scrapers, - buckets, - sprayers, - pressure cleaners, - disinfectant and detergents, - manual back-pack sprayers,

		- self-powered back-pack sprayer, - high-pressure washing machines, - mobile disinfection gates for vehicles, - mobile disinfection channel for personnel,